Digital Course Solution Improves Student Success

Prior to using *Connect® Psychology,* Professor Igor Dolgov faced both academic and administrative challenges in his psychology courses. He sought to improve student engagement and study skills to increase student success, while freeing up time spent on administrative tasks in order to focus on student learning. *Connect Psychology* successfully addressed these challenges, increasing not only engagement, but also student success and retention, resulting in higher exam scores and course grades.

Institution Profile

New Mexico State University is a public, four-year land-grant institution, which enrolls over 18,000 students, 40% of whom are Hispanic, at its main campus in Las Cruces annually. NMSU is dedicated to teaching, research, and service at the undergraduate and graduate levels with 63 certificate, 66 associate, 87 bachelor's, 51 master's, 21 doctoral, four specialist in education and three doctor of education degree programs.

Implementation

Course Description:

Psychology 201G is a one-semester, introductory psychology course which uses a hybrid course model, requiring students to participate in a combined three hours per week of lecture and online learning. This course typically enrolls a large class size, between 100-110 students per section, and 1,200 students annually.

Course Grade:

- 60% of the final grade based on four course exams
- 30% of the final grade based on 16 *Connect Psychology* assignments
- 10% of the final grade based on attendance/participation
- The use of McGraw-Hill *LearnSmart™, Connect's* adaptive assessment tool, was optional for extra credit.

Digital Product in Use:
Connect Psychology

Course Name:
Psychology

Course Type:
Hybrid (3 hours/week lecture & online)

Credit Hours:
Three

Textbook in Use:
Psychology: Making Connections by Feist and Rosenberg, 1e

Instructor Name:
Igor Dolgov, Assistant Professor of Psychology

Enrollment:
220/year (instructor total)
1,200/year (university total)

Case Study Term:
Fall 2009 and Spring 2010

"Students who have taken full advantage of the tools available to them through Connect have been able to reinforce the material presented in lecture and in the book, and have generally found exams to be challenging, but not difficult. Moreover, students were able to converse freely about the majority of the topics presented in this wide survey course."

- Professor Igor Dolgov

Implementation of McGraw-Hill *Connect*

Following an intensive review of a variety of online teaching and assessment offerings, Professor Dolgov decided to adopt McGraw-Hill *Connect* in September 2009 to address three primary objectives:

1. Increase student engagement
2. Simplify class preparation and grading to refocus instructor time on teaching
3. Improve students' study skills and performance

Connect Psychology was implemented to deliver course critical digital content including interactive exercises, practice tests, and assignments, accounting for 30% of the final course grade. Students were required to complete their online homework for the course. Additionally, students were strongly encouraged to use the *Connect Psychology* Study Center and the *LearnSmart* adaptive study product to build their skills and master course topics, which were assigned as extra credit work.

Results Achieved

Following the term, NMSU student exam grades were analyzed to evaluate the impact of *Connect Psychology*. The data indicated that students who used *LearnSmart,* a powerful adaptive learning system integrated in *Connect,* performed better on their exams than students who did not use it. Specifically, the more modules students completed, the greater their success and retention of learned knowledge. The Fall 2009 term results showed students who completed all the *LearnSmart* modules scored a weighted average of 10.24% higher on all exams as compared with those students who did not use *LearnSmart* (see Figure 1).

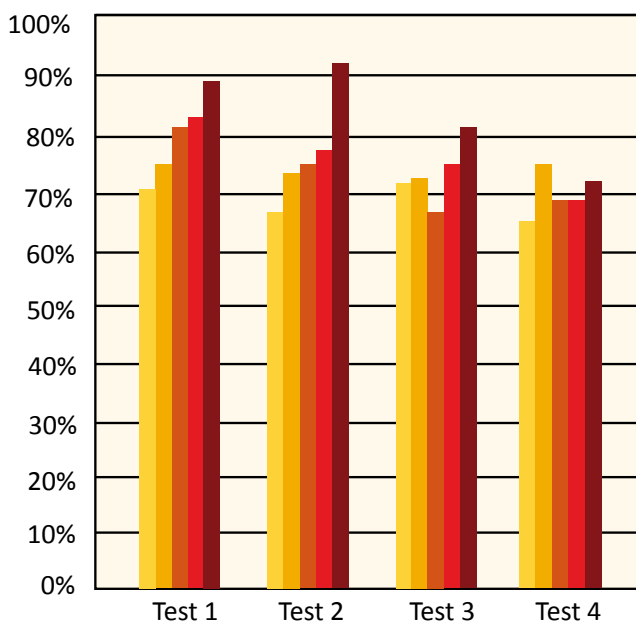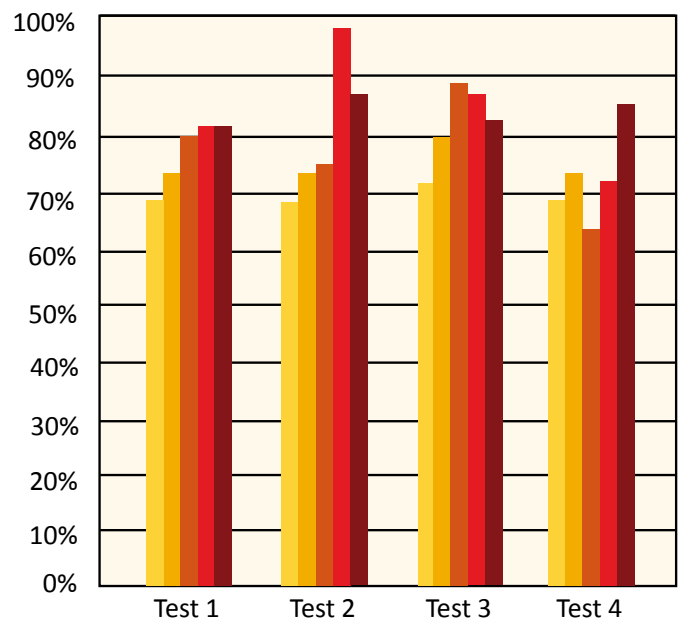Figure 1 - Fall 2009 Semester Exam Averages

Figure 2 - Spring 2010 Semester Exam Averages

LearnSmart modules completed

- 0-0.5 modules
- 1-1.5 modules
- 2-2.5 modules
- 3-3.5 modules
- 4 modules

The subsequent term revealed an even greater impact on student achievement with *Connect Psychology*. Results showed that students who completed all of the *LearnSmart* modules in the second term scored a weighted average of 14.58% higher on all exams through the use of *LearnSmart* (see Figure 2).

Professor Dolgov attributes this rise in student success and retention of learning outcomes to three key *Connect Psychology* features:

1) *LearnSmart* **adaptive study modules for remediation and prep**
2) *Tegrity* **recorded lectures for retention**
3) **Pre-populated online homework assignments for assessment**

Connect Psychology allowed for Professor Dolgov to administer higher order questions with automatic-grading, saving hours of grading time and enabling Professor Dolgov and his teaching assistants to focus their time and energy on teaching students. Professor Dolgov and his teaching assistants now spend only one hour per week downloading student grades, as compared to the 20 hours per week they used to spend manually grading assignments.

Professor Dolgov's students shared a strong appreciation for *Learn-Smart,* which personalizes the study environment based on student needs by detecting concepts students have missed and providing further practice. This practice helps students retain new concepts to build mastery. *Connect Psychology* also directed Professor Dolgov's students to the eBook for just-in-time review as needed.

> *"The* LearnSmart *system stuff helped A LOT. I would say that if you want to pass the class, you need to do those. They helped me remember things I otherwise wouldn't have know on the test. Also, the recorded lectures are amazing for review! Thank you so much!"* - Student at NMSU

> *"Three aspects of* Connect *have helped me become a much more efficient educator: preloaded online home-work assignments;* LearnSmart *study modules; and the recorded lectures using* Tegrity. *I am able to construct the entire semester worth of assign-ments in an hour or two and never have to worry about grading for the rest of the semester. The* LearnSmart *modules ensure that there is a way for students to be able to drill them-selves for exams, thus I do not have to hold weekly review sessions. The availability of the recorded lectures for the students to view at home ensures that those students that missed class due to unforeseeable circumstances or illness do not have to miss any of the material presented in class. These tools allow me to devote more time to individual students when they are in need of assistance and to keep improving the course from semester to semester."*
>
> - Professor Igor Dolgov

Conclusion

Significant student success has been achieved at NMSU through the use of *Connect Psychology,* including increased student engagement and performance. Professor Dolgov recommends *Connect Psychology* to other psychology professors and NMSU faculty, and has expanded his use of *Connect* by requiring *LearnSmart* modules and making more use of the lecture capture technology, *Tegrity™,* to help students review critical course lecture material. *"Connect* is a great system to ease the logistics of teaching a course," Dolgov observes. "On the back end, the tech support team did a good job of supporting us as well."